

## RABIES IN THE NATIONAL PARKS

Rabies is a deadly viral disease that is fatal in humans unless the victim receives prompt medical attention. Fortunately this disease has become fairly rare in the U.S. (36 cases since 1980). The reasons for this decline are the wide spread publicity this disease has received and the effective measures taken to prevent it.

The rabies virus is transmitted from the saliva of infected animals. This happens most often from a bite although it can also occur from a scratch. Very rarely it is transmitted from saliva contact with broken skin or mucous membranes or from inhalation of aerosolized bat feces. About 40,000 people receive post-exposure treatment each year after contact with known or possibly rabid animals.

Although the rabies virus can infect just about any mammal, it is most frequently found in raccoons, skunks, bats, foxes and coyotes, and occasionally in cattle and unvaccinated cats and dogs. In 1996, 7,124 cases of rabies in animals were reported in the U.S. including the District of Columbia and Puerto Rico. Raccoons were the most frequently reported rabid wildlife species (50.4% of all animal cases during 1996), followed by skunks (23.2%), bats (10.4%), foxes (5.8%), and other wild animals, including rodents and lagomorphs (2.1%). See figures below for distribution of rabies in most important animal reservoirs.

Reported Cases of Rabies in Raccoons, 1996



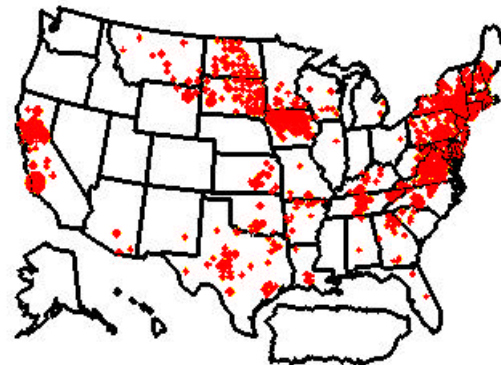
Adapted from CDC, NCID

Reported Cases of Rabies in Foxes, 1996



Adapted from CDC, NCID

Reported Cases of Rabies in Skunks, 1996



Adapted from CDC, NCID

Reported Cases of Rabies in Coyotes, 1996



Adapted from CDC, NCID

Reported Cases of Rabies in Bats, 1996



Adapted from CDC, NCID

We tend to think of skunks, raccoons, foxes, coyotes, dogs and cats as being the major source of human rabies in the U.S. However, since 1980, 22/36 cases were caused by insectivorous bats. The most recent case was in Virginia, December, 1998. In over half the cases, the victim wasn't aware of having contact with a bat. In less than half the cases, the victim recalled seeing a bat, but wasn't aware of being bitten or scratched. (Insectivorous bats have small, needle-like teeth and claws. Consequently, bites and scratches easily go undetected.)

The bat implicated in most of these human cases is the widely distributed silver-haired bat (*Lasionycteris noctivagans*). Bats most frequently found infected with rabies virus include the big brown bat (*Eptesicus fuscus*) in the northeast, Mexican free-tailed bat (*Tadarida brasiliensis*) in the southwest and the red bat (*Lasiurus borealis*) in the southeastern and mid-Atlantic states.

### How can rabies be prevented?

- Vaccinate pet dogs, cats and ferrets.
- Prevent or minimize contact between pets and wild animals.
- Pre-exposure vaccination if your work involves handling wild animals.
- If bitten or scratched:
  - Immediately, cleanse the wound thoroughly to flush out the virus.
  - Capture the animal if you can do so safely to have it tested for rabies by your local health department. Try not to damage the head since the brain has to be tested for the presence of the rabies virus. Never handle the animal with your bare hands. Wear thick leather gloves or use tongs or some other device to pick it up. Place the animal in a cardboard box, coffee can or some other suitable container.
  - If you can't safely capture the animal contact your animal control office for assistance. Write down your observations about the animal including species, location, how contact with the animal occurred and any unusual behavior exhibited by the animal.

- See a doctor immediately for follow-up and possible post-exposure treatment.
- Call your local animal control office to pick up dead, sick, and strange acting animals. Remember most wild animals normally will not approach humans and most are not active during the day.
- Teach children not to handle stray animals even if they appear friendly.
- Prevent bats from entering buildings where they might come into contact people and pets. Bats can enter openings as small as 1/4 by 1/2 inch.

### REFERENCES

1. Health Information, National Center for Infectious Diseases, Centers for Disease Control and Prevention, Department of Health and Human Services
2. Hunt, H.A. and Bhatnagar, K.P., "Human rabies and silver-haired bats in the United States", Bat research News, 38:4, pps. 85-88.

If you have any questions, please contact your Regional Public Health Consultant or park sanitarian, or call WASO Public Health for more information at 202-565-1120 or see our NPS Public Health web page at [www.nps.gov/public\\_health/](http://www.nps.gov/public_health/).

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**NATIONAL PARK SERVICE**  
**Public Health Program**  
**1849 "C" St., NW (Room 7427)**  
**Washington, D.C. 20240**  
**202-565-1120**  
**Fax 202-565-1115**

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